Introduction to the course

DevOps: Automating Software Delivery and Operations

30th Aug 2022

Chinmaya Dehury

chimnaya.dehury@ut.ee
## Course Duration and Schedule

<table>
<thead>
<tr>
<th>Activity</th>
<th>Day</th>
<th>Time</th>
<th>Room no.</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures</td>
<td>Tuesday</td>
<td>14:15-16:00</td>
<td>1008</td>
<td></td>
</tr>
<tr>
<td>Practice</td>
<td>Tuesday</td>
<td>16:15-18:00</td>
<td>1024</td>
<td>(Group-1) (Chinmaya Dehury)</td>
</tr>
<tr>
<td></td>
<td>Wednesday</td>
<td>16:15-18:00</td>
<td>1022</td>
<td>(Group-2) (Shivananda Rangappa Poojara)</td>
</tr>
</tbody>
</table>

### Final Exam

Student may choose any one date based on their convenience:

- **Week 15**: Option 1: ~06 Dec 2022
- **Week 16**: Option 2: ~13 Dec 2022
Course Structure

https://courses.cs.ut.ee/2022/DevOps/fall/Main/Lectures

Week-2 : Lec-01: 06 Sept: Introduction to the Course + Introduction to DevOps Part I
   Lab-01: Working with Cloud Infrastructure

Week-3 : Lec-02: 13 Sept: Introduction to DevOps Part II + Cloud Computing
   Lab: Working with Docker Engine

Week-4 : Lec-03: 20 Sept: Version Control System (VCS)
   Lab: GitLab: Version Control System

Week-5 : Lec-04: 27 Sept: Containerization
   Lab: Working with Kubernetes

Week-6 : Lec-05: 04 Oct: Microservice-based Application Development
   Lab: Microservice & APIs

Week-7 : Lec-06: 11 Oct: Automation
   Lab: Ansible automation tool

Week-8 : Lec-07: 18 Oct: Continuous Integration, Delivery and Deployment
   Lab: CI/CD with GitLab

Week-9 : Lec-08: 25 Oct: Continuous Testing
   Lab: CI/CD & Testing

Week-10 : Lec-09: 01 Nov: Monitoring
   Lab: Prometheus

Week-11 : Lec-10: 08 Nov: Application Deployment Modelling
   Lab: TOSCA Modelling & Orchestration

Week-12 : Lec-11: 15 Nov: DataOps
   Lab: CI/CD with Data intensive application

Week-13 : Lec-12: 22 Nov: DevOps for serverless
   No Lab. Catch up time.

Week-14 : Lec-13: 29 Nov: Industrial and Research Challenges and Future Scope
   No Lab. Catch up time.
Resources

• Computing resource - ETAIS marketplace ([https://minu.etais.ee/login/](https://minu.etais.ee/login/))
  • OpenStack
• [https://gitlab.cs.ut.ee/](https://gitlab.cs.ut.ee/)
  • Login with university credentials
• Zoom – To attend lectures online
• Panopto – For recorded lectures
• Communication: [https://zulip.cs.ut.ee/#narrow/stream/36-DevOps2022Fall](https://zulip.cs.ut.ee/#narrow/stream/36-DevOps2022Fall)
  • Login with university credentials
  • Don’t sign-up
  • We will **not** use Slack
Grading Policy

Grading
• Timely submission of homework and practical: 50 points
• Final examination: 45 points
• Active participation in lecture: 5 points

Note: The total score will be truncated to 100, if it is exceeding.

Exam and Deliverable
• Deadline for each practice session is end of next week (i.e. timely submission).
  • E.g. For the practice sessions on 06.Sept (Tue) and 07.Sept (Wed), you need to submit the deliverable by 16.Sept (Fri).
• Post-deadline submission: score for that practice session will be deducted by 50%.
• Submit bonus tasks and get bonus 20% point (10% point for post-deadline submission).
• Submission of at least 10 deliverables is a must-have condition to be able to attend final examination.
• Each submission will be evaluated and scored out of 10.
• Each timely and complete submission will give you 10 out of 10.
• Instructure may give you another chance if the submission is incomplete and let you score 10 out of 10.
• You may find the definition of Complete submission in the corresponding deliverable section.
Mode of Delivery: Online and Offline

• For communication:
  • Make sure that you have joined the DevOps2022Fall Zulip stream
  • write to Chinmaya.Dehury@ut.ee, if you are not in that stream.

• Most of the lectures will also be in online (using panopto)
• During lecture, you may ask question over Zulip

Quick Survey ->

1. Course Delivery:
2. For Online delivery:

https://www.menti.com
Code: 97 20 42 6
Plagiarism policy

• Please go through following link:
  https://www.ut.ee/en/current-students/academic-fraud

Some of the books you may find in Library
Any Question?

THANK YOU